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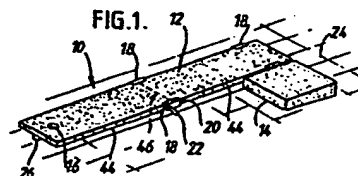
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(54) A putting practice unit.

(57) A putting practice unit comprising a board 10 having a putting surface 12. A person stands on a platform 14 and puts a ball along the putting surface 12 towards an opening 16 at the other end of the board.

The orientation of the putting surface relative to the floor may be varied by pivotally adjusting legs 22 resting on a floor 24, the legs 22 being pivotally connected to a channel shaped member 20 which receives and grips the edge of the board.

The board 10 is in two sections 44 which are held together by two of the channel shaped members 20. Removal of those channel shaped members 20 allows the board sections to be folded about a hinge 46 until one section lies on top of the other for storage of the unit.



### A PUTTING PRACTICE UNIT.

This invention relates to a putting practice unit and in particular, although not exclusively, to a putting practice unit for indoor use.

A known putting practice unit comprises a mat which is  
5 laid on a floor to enable the golfer to practice his putting. Most floors are flat and level and do not permit the golfer to practice puts which are other than on a flat and level surface and does not allow variations in the putting surface. According to the present invention a putting practice unit  
10 includes a board and a number of board support means, the board having a putting surface with an opening which in use, may receive a ball, the or each board support means being arranged to extend between the board and the floor surface, the board support means being adjustable whereby  
15 the orientation of the board relative to the floor surface may be varied thereby varying the putting surface. With such a putting unit, the putting surface may be varied to allow puts to be made on a surface other than one which is flat and level, although of course, a putting surface which  
20 is flat and level may be provided if required.

Preferably each board support means comprises an assembly including a board engaging member and a leg pivotally mounted on the board engaging member. Pivotal adjustment of the leg provides a convenient way of altering the height  
25 of that part of the board with which the board engaging member engages. Advantageously the board engaging members comprises a channel shaped member arranged to receive the edge of the board. Thus the board engaging member may be readily attached and detached from the board. Advantageously the sides of the  
30 channel shaped member are flexed away from each other when the channel shaped member receives the edge of the board. Thus the channel shaped member may be held in position on the board by the natural flexure of the sides of the channel

shaped member. Preferably, the edge of the board has indentations corresponding to the channel shaped member to facilitate attachment of the channel shaped member on to the board and provide an accurate location of the channel shaped member thereon. The board engaging member and/or the leg may be moulded from plastics.

Advantageously the board may include at least two board sections. This facilitates storage of the unit. Preferably at least one channel shaped member receives the edges of the two board sections thus the channel shaped member can provide the necessary rigidity between the two board sections. Preferably the putting surface is provided by a flexible surface secured to and connecting the board sections whereby, although the board includes at least two board sections, these can be folded together to provide a compact structure for storage whilst still enabling the unit to provide a continuous putting surface.

Advantageously the unit includes a platform of substantially the same thickness as the board which, in use, may be located adjacent to the board. The platform may be wedge shaped. Accordingly a person using the unit may stand at the same height and inclination as the putting surface.

The board, board sections or platform may include expanded polystyrene blocks to provide a lightweight unit. The putting surface may be provided by a flexible polypropylene mesh having attached thereto a nylon based artificial grass surface. The artificial grass surface can be brushed to alter the "nap" of the grass and may also be wetted to simulate conditions likely to be found on a golf course.

The invention may be carried into practice in various ways but certain embodiments will now be described by way of example and with reference to the accompanying drawings, in which:-

5 Figure 1 is a perspective view of a putting practice unit affording a downwardly sloping putting surface;

Figure 2 is a view similar to Figure 1 with an upwardly sloping putting surface;

10 Figure 3 is a partial view of a putting practice unit affording a downwardly sloping putting surface;

Figures 4A and 4B are perspective views showing how a board engaging member of a board support means is attached to the board of a putting practice unit;

15 Figure 5 is a perspective view of the central section of the putting practice unit shown in Figures 1 and 2, and;

Figure 6 is a perspective view of the putting practice unit showing two board sections in a partially collapsed position.

As shown in Figures 1 and 2, the putting practice unit comprises a board 10 with a putting surface 12. A person may 20 stand on a platform 14, located adjacent to one end of the board 10, and put his ball along the putting surface 12 towards an opening or hole 16 in the other end of the board 10.

A number of board support assemblies 18 engage the edges of the board 10 with a channel shaped member 20, each channel 25 shaped member having a leg 22 pivotally connected thereto.

In Figure 1, the legs 22 of the assemblies 18 at the end of the board 10 adjacent to the platform 14 are orientated such that that end of the board lies clear of a floor surface 24. The legs of the support assemblies 18 located at either side 30 of the board at the centre of the board are inclined at approximately  $45^{\circ}$  to hold the centre of the board away from the floor surface. The end of the board with the hole 16 is propped up just clear of the ground by a golf ball 26.

Thus the board 10 is inclined downwardly towards the hole 16. 35 The platform 14 is also inclined downwardly towards the hole 16 so that a person is able to stand at the same level and inclination as the putting surface. The person may hit a succession of

balls down the putting surface, each ball passing through the hole 16 on to the floor surface 24 to make way for the next ball. In Figure 2, the legs of the support assemblies 18 at either side of the central region of the board are inclined at the same angle as the corresponding legs in Figure 1. A pair of support assemblies are located towards the end of the board with the hole 16, and the legs of these assemblies are almost vertical to hold that end of the board well clear of the ground and provide an upwardly sloping putting surface. The platform 14 has been reversed from the position shown in Figure 1 to give an upwardly sloping platform at the same level and inclination as the putting surface. As shown in Figure 3, the platform 28 is located on a platform 30 of uniform depth to bring the overall height and inclination of the platform 14 to the same height and inclination as that of the board 10.

As shown in Figures 4A and 4B, the board support assembly includes the channel shaped member 20 which has an upper flange 32 and a lower flange 34 connected together by a central plate 36. The lower flange 34 extends further in the direction away from the central plate 36 than does the upper flange 32. The flanges 32 and 34 converge slightly towards each other in the direction away from the plate 36 under their natural flexure. When the channel shaped member is attached to the side of the board 10 the edges of the flanges are flexed outwardly as the channel shaped member is pushed over the edge of the board so that they extend parallel to one another as shown in Figure 4B. The natural flexure of the flanges 32 and 34 urging them towards each other tends to hold the channel shaped member on the side of the board. As shown in Figure 4A and Figure 5 the board 10 is formed with recesses 38 on its upper and lower edges to assist in attaching the assemblies on to the board and to accurately locate the assemblies. The leg 22 is pivotally attached to the channel shaped member 20 by a nut and bolt 40 which passes through a hole in the leg 20 and the plate 36 to frictionally grip the leg to the member 20 and allow the leg to be held in the required position under the weight of the board.

As shown in Figure 5, the board 10 is covered with an artificial grass surface 42 comprising a polypropylene mesh backing having a layer of nylon fibres 42. The backing 42 extends over the putting surface 12 and covers the adjoining sides of the board 10. The platform 14 is also covered with a polypropylene mesh backing having a layer of nylon fibres.

As shown in Figures 5 and 6, the board 10 is formed from two board sections 44 which are connected together by the backing 42. As the backing 42 is flexible, the putting surfaces on the board sections 44 may be folded towards each other, as shown in Figure 6, about a hinge 46, to afford a shape convenient for storage. The length of the folded structure is 1.2 metres. The hinge is reinforced by a backing tape 48, part of which is shown in Figure 6.

If the board sections 44 were only connected by the flexible hinge 46 then, when the board was in the position shown in Figure 1 or 2, the board would tend to collapse about the central hinge. Accordingly a channel shaped member is arranged to extend over the join between the board sections, the upper and lower flanges 32 and 34 and the central plate 36 each assembly 18 providing the required rigidity across the hinge.

As shown in Figure 6, each end of the board 10 may have a hole 16, or indeed there may be two holes 16 at one end of the board.

Although the drawings illustrate situations where the putting surface is either uphill or downhill, it will be appreciated that by suitably adjusting the orientation of the legs 22 on opposite sides of the board a putting surface which slopes from side to side, with or without being inclined in the direction of the put, can be provided.

It will also be appreciated that although the putting surface shown in the drawings is provided by a substantially planar surface, the board 10 could be made of a material which allows flexure of the board to provide an undulating putting surface or indeed any shaped putting surface that is likely to be encountered on a golf course.

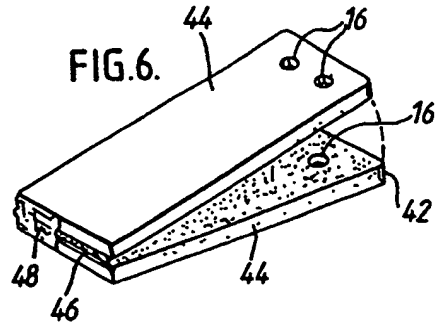
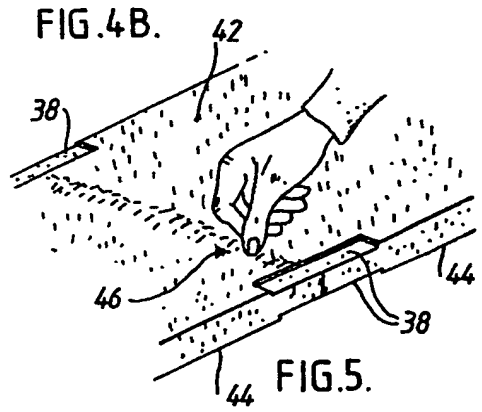
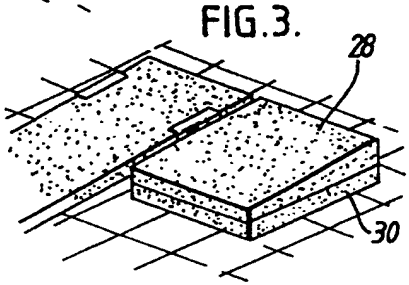
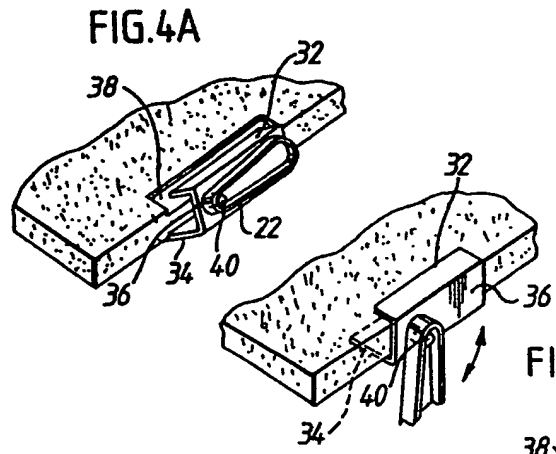
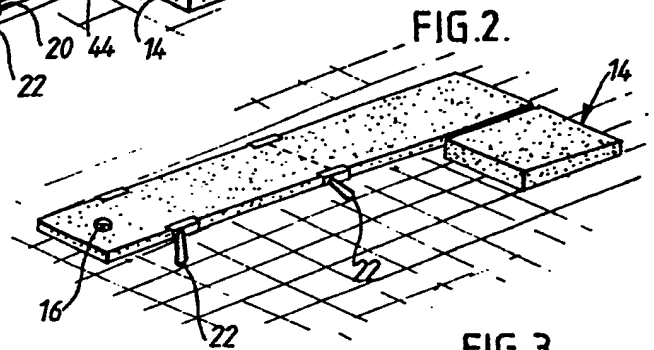
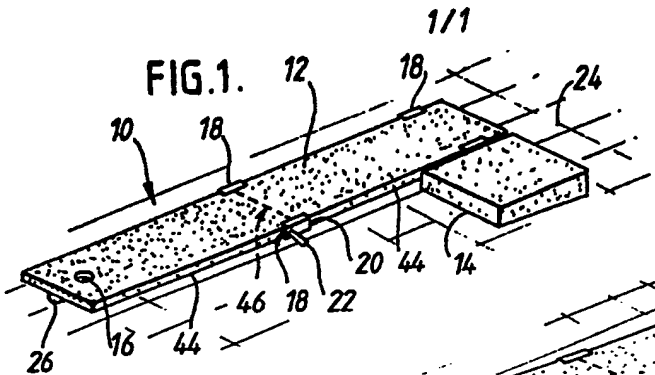
The board 10 is made of expanded polystyrene to afford a lightweight unit. The legs 22 and the channel shaped members 20 are moulded from plastics.

CLAIMS.

1. A putting practice unit comprising a board (10) and a number of board support means (18, 20, 22), the board (10) having a putting surface (12) with an opening (16) which, in use, may receive a ball, the or each board support  
5 means being arranged to extend between the board and a floor surface (24), the board support means (22) being adjustable whereby the orientation of the board relative to a floor surface may be varied thereby varying the putting surface.
- 10 2. A unit as claimed in Claim 1 in which each board support means comprises an assembly including a board engaging member (20) and a leg (22) pivotally mounted on the board engaging member.
- 15 3. A unit as claimed in Claim 2 in which each board engaging member comprises a channel shaped member (20) arranged to receive the edge of the board.
- 20 4. A unit as claimed in Claim 3 in which the sides (32, 34) of the channel shaped member (20) are flexed away from each other when the channel shaped member receives the edge of the board.
- 25 5. A unit as claimed in Claim 3 or 4 in which the edge of the board has indentations (38) corresponding to the shape of the channel shaped member.
- 30 6. A unit as claimed in any of Claims 2 to 5 in which the board engaging member and/or the leg are moulded from plastics.
7. A unit as claimed in claim 3, 4 or 5 in which the board includes at least two board sections (42) and at least one  
35 channel shaped member receives the edges of two board sections.



8. A unit as claimed in Claim 7 in which the putting surface is provided by a flexible surface (12) secured to and connecting the board sections.
- 5 9. A unit as claimed in any preceding claim including a platform (14) of substantially the same thickness as the board and which may be wedge shaped, which, in use, may be located adjacent to the board.
- 10 10. A unit as claimed in any preceding claim in which the putting surface (12) is provided by a flexible polypropylene mesh having attached thereto a nylon based artificial grass surface.





EP 83303126.3

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 7)
X	US - A - 4 240 637 (CROSS) * Abstract; fig. 1 * --	1	A 63 B 69/36 A 63 B 67/02
X	US - A - 2 465 418 (BAKER) * Totality * --	1,2,3,8	
A	DE - B - 1 176 035 (GÜNTHER) * Totality * --	2	
A	US - A - 3 430 964 (BUDZINSKI) * Abstract; fig. 3 * --	2	
A	US - A - 3 936 055 (SCOTT) * Abstract; fig. 1,3 * --	7,9	
A	US - A - 3 727 917 (MAC LEAN) * Abstract; fig. 1; column 2, lines 18-32 * --	8	
A	US - A - 4 275 886 (BANNON) * Abstract; fig. 1,2 * --	9	
A	US - A - 4 294 450 (GALLIC) * Fig. 2 * --	10	
A	US - A - 4 311 312 (O'BRIEN) * Abstract; fig. 2 * ----	10	
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 02-08-1983	Examiner SCHÖNWÄLDER
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			